STAGETRACKER FX EFFECTS ENGINE

TTA FX

USER MANUAL

REV.1.2, DECEMBER 5TH 2008

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1. INTRODUCTION

This manual is relevant to operation of the Stagetracker FX Effects Engine and TTA FX software except where mentioned specifically.

The Stagetracker FX Effects Engine and TTA FX software packages are unique solutions for editing and playback of digital sound effect files in live situations. While the Effects Engine has been designed primarily to be used with the Tracking Engine as part of the total Stagetracker FX system, the program may be used as standalone FX playback systems in situations where performer tracking is not required.

When the Effects Engine is used in conjunction with the Stagetracker FX Tracking Engine, the user is presented with a range of powerful and unique audio localisation possibilities, including manual and pre-programmed movement of audio, removal of performers from tracking etc.
For familiarity and ease of control, these advanced effects are available via the same timeline based interface as is used for sound effects playback.
Please note that these options are not available to users of TTA FX.

Productions are based around a cue list in an easy-to-understand user interface. The system allows you to edit the contents of your cues and the relationship between them. Each cue has its own timeline, which offers infinite possibilities for combinations and layering of sounds.

All computers running the Effects Engine or TTA FX may be networked and synced, providing significant advantages for multi-user installations.
For example, a theatre may have a Stagetracker FX installation on the main stage and one or more TTA FX systems running in sound effects editing suites. It is no longer necessary to waste valuable rehearsal time while sound effects are edited as this can now be done in an editing suite while rehearsals continue. The edited files are then placed on a central server, making them instantly available to the Stagetracker FX system.
Show files can be edited and shared in a similar way, keeping all system on the network up-to-date. The system will always notify you if there is a newer version present and ask if you would like to use the newer version.

For the sake of simplicity, this manual will hereafter refer to both programs as TTA FX.

All text written in italics provides more information and explanations.

1.1 PACKAGE CONTENTS

The package contains:

- TTA FX software CD (*)
- Printed user manual (*)

(* Unless downloaded over the web. In which case both items above are presented digitally)

1.2 SYSTEM REQUIREMENTS

The software runs on both Macintosh and Windows platforms:

OS requirements:

- Windows 2000/XP/Vista
- Mac OS X (10.4 or later)

Hardware requirements:

- 1.5Ghz CPU or better.
- Minimum 1GB RAM. 2GB RAM recommended.
- Good quality sound card installed
  (Multi-output sound card is required to make use of TTA FX's 16 possible outputs.)

2. INSTALLATION

2.1 SOFTWARE INSTALLATION

Macintosh platform:
Double-click the TTA_FX.pkg file to install the software. The default location for the installation is /Applications/TTA/FX .
Add the file "FX" to the Mac's dock for easy access to the software.

Windows platform:
Double-click the TTA_FX_installer.exe file and follow the instructions to install the software onto your hard drive.
The default location will be C:/TTA/FX .

You will need to have Java JRE 5.0 installed on your computer to run the software. This can be downloaded here:
http://java.sun.com/javase/downloads/index_jdk5.jsp

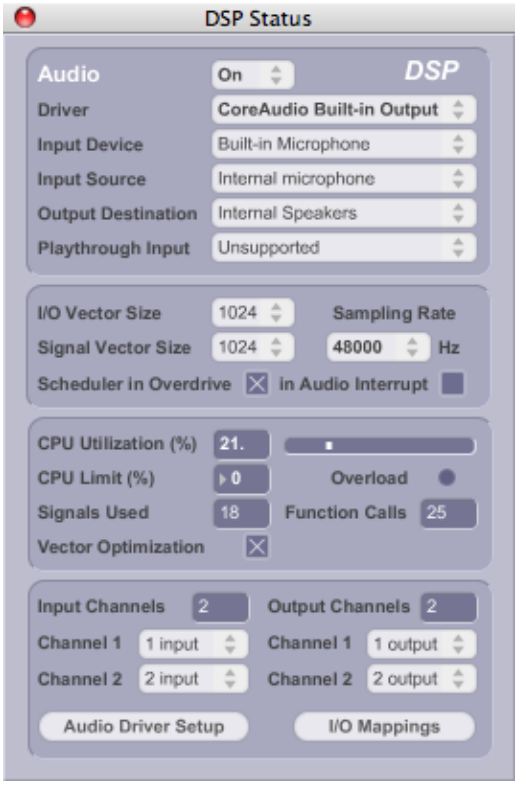
2.2 HARDWARE INSTALLATION

Connection to TTA FX will be determined by the sound card installed in the computer on which the software is running. Factors to consider are the audio format (analog or digital), the type of connection to use (jack, XLR, ADAT etc) and the number of inputs and outputs available.
For optimal performance, a sound card with 2 (or more) inputs and 16 outputs is recommended. To achieve maximum control over the audio from TTA FX it is recommended that the outputs are connected to a mixing console. If you intend to use the stereo recorder in TTA FX, connect a stereo line from the desired source (again, preferably a mixing console) to sound card inputs 1 and 2.

Please note, if the Stagetracker FX Effects Engine is to be used in conjunction with Stagetracker FX Tracking Engine, refer to section 2 in the Tracking Engine user manual for connection assistance.

2.3 CONFIGURING THE SYSTEM

1. Connect the necessary cables as described in System Connection
2. Launch the application by clicking the FX file.
3. When you launch the TTA FX software you will notice that two applications open. The application called Audio_Engine handles the sound playback. FX is the interface you will be working in.
4. To set up your sound card, go into Audio_Engine.
   Click the "Settings" button to open the available settings.



<- This should be left as is.
<- This is where you select your audio driver. On windows, ASIO is preferred, on Macintosh CoreAudio is preferred.
(Leave the rest in section as is)

<- Set your sampling rate to either 44.1, or 48 kHz.
The I/O Vector Size and Signal Vector Size will determine the system's latency. Lower is better, although performance will be dependent upon computer hardware.

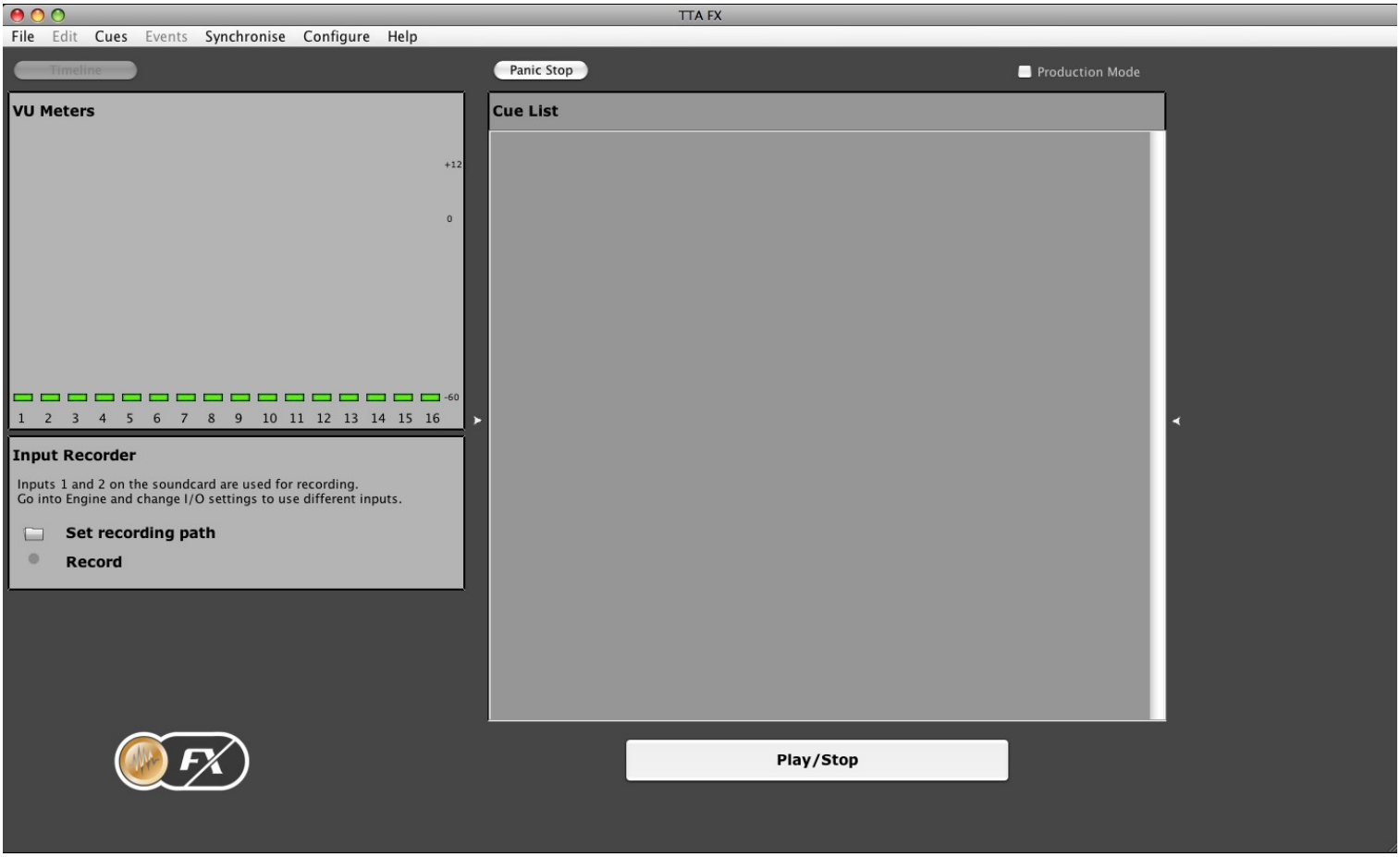
(Leave the rest as is)

3. THE PRODUCTION VIEW

3.1 INTRODUCTION

This section will take you through a few simple steps to set up your new production.

- When launching the application you are presented with this screen which shows the Production View.



Production View

There are two view screens in TTA FX: Production View and Timeline View.
Production View shows a list of all the cues in a show.
When you first open TTA FX, the screen is empty as no cues have yet been added to the show.
The first thing we have to do is to create a cue.

3.2 CUES

To start your production, go into the cues menu to add your first cue.
Cues → New Cue *(shortcut: Ctrl+n)*.

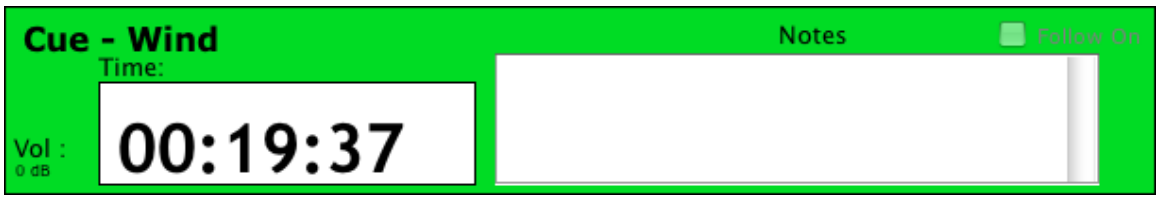
- Creating a cue.
There are currently two cue types;
- Play Cue
- Stop Cue

Let's start by creating a Play Cue.

- Play Cue properties.
Give the cue a descriptive name and click OK. *(Use the 4 radio buttons to select where this new cue should be inserted.)*

After clicking OK in this dialogue, your new cue is added to the cue list.

3.2.1 PLAY CUES



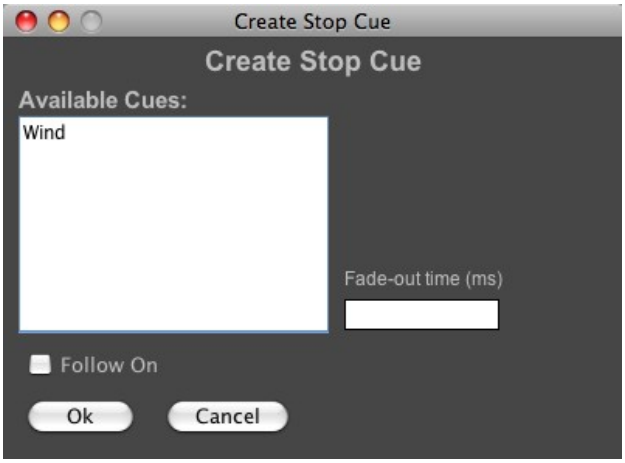
This is how a Play Cue will appear in the cue list. *(The colour will depend upon the state of the cue and the colour selected in User Preferences)*. The

Production View has been designed to conceal advanced functionality in order to present a simpler, fail-safe environment.
Each Play Cue has its own global timeline and the time shown here is the remaining time of the cue. When the cue is started, the time will count down to 00:00:00.

To the left of the time display, a volume label shows the master volume for the cue. To the right of the time display is a note area for leaving comments about the cue. *(To enter the comment area, ctrl+click inside it. Ctrl+click again to leave.)*
The Follow On checkbox will allow this cue to automatically trigger the following cue in the list when this cue either starts or ends. *(Ctrl+click to change state.)*

3.2.2 STOP CUES

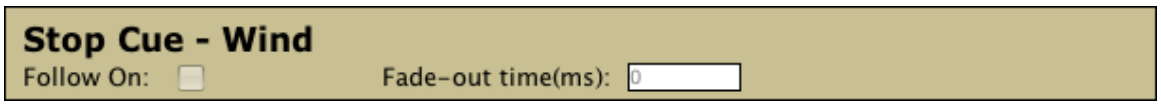
A Stop Cue must be assigned to a specific Play Cue. To create a Stop Cue, follow the same steps as you would for creating a Play Cue.
Cues->New Cue. *(Shortcut ctrl+n)*. Select Stop Cue.



The Available Cues list will show a list of all Play Cues which do not currently have a Stop Cue assigned to them.

Select one of the entries in the list. If you require Follow On functionality on this cue, check the checkbox.

Fade-out time will allow the Stop Cue to fade-out the Play Cue over a certain amount of time.



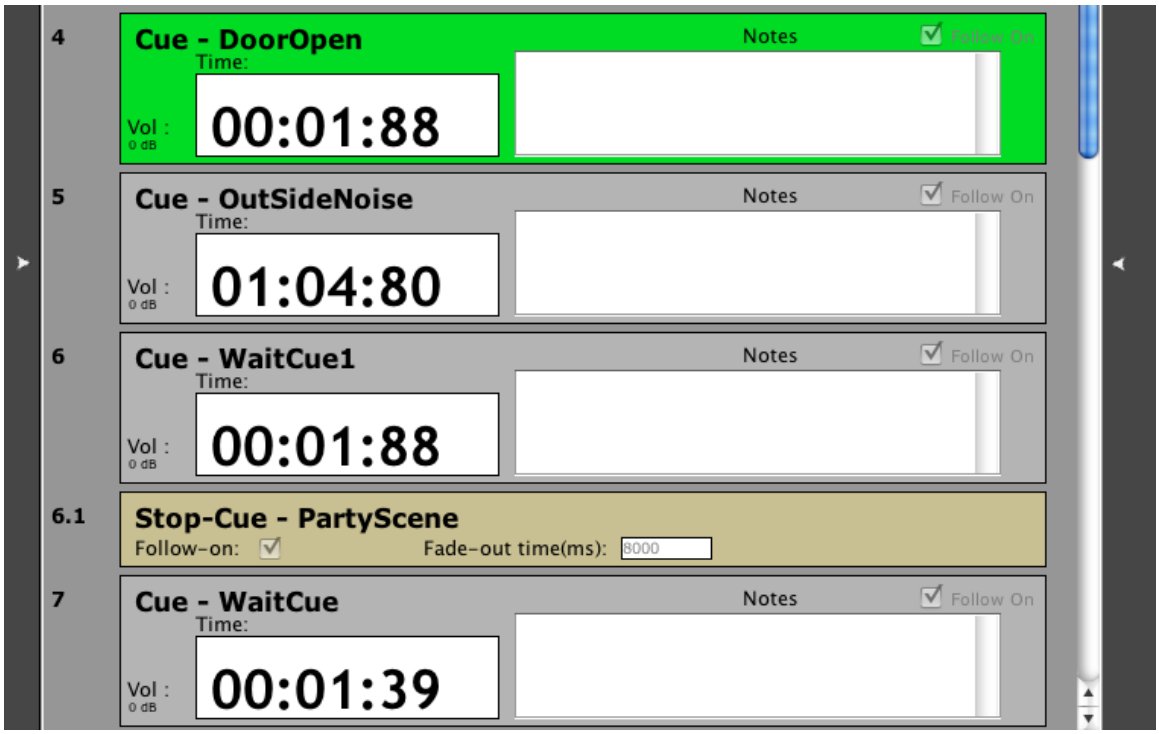
This is how a Stop Cue will appear in the cue list. (*The colour will depend upon the state of the cue and the colour selected in User Preferences)*.

The Stop Cue title shows the name of the Play Cue to which it is assigned.
Follow On works in the same manner as it does for Play Cues *(Ctrl+click to change state)*.
The fade-out time shows the amount of time it will take for the Play Cue to fade-out when the Stop Cue is triggered. *(Ctrl+click to change fade-out time. Then press enter to confirm new time.)*

3.3 ADD / DELETE CUES

Add a cue by selecting Cues → New Cue *(Shortcut: Ctrl+n)*
Delete a cue by selecting the cue to delete and select Cues → Delete Cue *(Shortcut: Ctrl+backspace)*

3.4 PLAYBACK OF THE CUE LIST



When you have added a number of cues to your production, this is how the cue list will appear. This is the screen you will use to playback a production. In a normal performance situation, your production will be fully set up and the

operator only has to press the spacebar should a cue need to be triggered manually.
You can have an infinite amount of cues in your list. All cues are numbered to make it easier to jump around in the cue list. Play Cues are given an integer increase; Stop Cues are given a decimal increase.

To play through the cue list, use the Play/Stop button on bottom of the screen. *(Shortcut: Spacebar).* This will launch the currently selected cue and auto-select the next cue in the list.

The next cue can be made to start automatically by setting a Follow On from the previous cue or by setting it to be triggered from an external MIDI source. If the next cue has not been set to start automatically, TTA FX will wait for the user to hit the spacebar again to trigger the next cue.

Multiple cues can be running at the same time, the only restriction being that the total number of sound files playing simultaneously cannot exceed 16.

3.4.1 CHANGE THE CUE ORDER

- Move up. Will move the currently selected cue one step up.
  Cues → Move Up. *(Shortcut: Ctrl+up arrow).*
- Move down. Will move the currently selected cue one step down.
  Cues → Move Down. *(Shortcut: Ctrl+down arrow).*
- Select next cue. Will select and load the next cue.
  Cues → Select Next Cue. *(Shortcut: Alt+down arrow).*
- Select previous cue. Will select and load the previous cue.
  Cues → Select Previous Cue. *(Shortcut: Alt+up arrow).*

Other tools that can be mentioned in this view are the self-explanatory Rename Cue and Duplicate Cue.

3.4.2 PANIC STOP

Panic Stop stops all running cues.
(Shortcut: esc)

3.4.3 USER DEFINED COLOR SCHEME

Cues in the cue list can have colours assigned to them to reflect their current state. (Colours are user definable in the Configure-menu. Configure -> User Preferences *(shortcut: Ctrl+,)*.
The states:

- Currently selected cue. Default green. This is the currently selected cue. Only one cue can be selected at any time. *(Note that the Currently Selected Cue will appear in the Passive Cue colour if cue is not yet loaded into RAM).*
- Loaded cue. Default light grey. Indicates that this cue is loaded into the computers RAM, but not currently selected.
- Passive cue. Default dark grey. Indicates that this cue is not loaded into RAM.
- Loop cue. Default blue. Indicates that this is a cue that will loop infinitely until stopped by a Stop Cue. Note that a Loop Cue will only appear blue when it becomes the currently selected cue.
- Stop Cue. Default brown. Indicates that this cue is a Stop Cue. Stop Cues also appear slightly smaller than Play Cues in the cue list.

The reason for showing cues in a Loaded or Passive (not loaded) state is that TTA FX allows a maximum number of 16 sounds to be loaded into the computer's memory simultaneously. All 16 files may be loaded into the same cue, or spread across multiple cues.
For example, if cue 1 contains eight sound files and cue 2 also contains eight sound files, cue 3 will be placed into a Passive state until either cue 1 or 2 has stopped playing, at which time there will be audio slots available for cue 3 and the sound files associated with cue 3 will be loaded into RAM.
Load times are typically less than a third of a second, depending on hard drive speed.
The software will always attempt to load as many cues as possible in order to facilitate the quickest possible changes between cues.

(Should the need arise for more than 16 sounds to be playing at the same time, the bounce functionality should be used to free up slots for new files.)

3.5 AUTOMATION IN THE CUE LIST

3.5.1 FOLLOW ON

When the Follow On option is checked, the following cue will be triggered automatically upon either the start or end of the cue. Play Cues and Stop Cues offer this functionality. The Follow On status of a cue can be toggled on or off in the cue list in Production View. Ctrl+click on the cue's Follow On checkbox to set the state.
Clicking the Follow On checkbox will bring up two options; On Start and On End, which will determine at which point the following cue is triggered.
If a Stop Cue has Fade out time set to 0, Follow On On End option will be unavailable.
Note: An assigned Follow On command will be ignored while a cue is in a Passive state.

3.5.2 MIDI Control

TTA FX offers the option to automate the cue list via MIDI. This will allow triggering of cues by a remote device in the MIDI chain.

To enable MIDI automation, select the MIDI device and the MIDI channel to listen to in Configure → User Preferences *(Shortcut: Ctrl+,)*
TTA FX can receive 3 different MIDI message types (their values are disregarded):

- NoteOn; will fire the currently selected cue (similar to Play/Stop button)
- ProgramChange; will select the next cue in the cuelist
- ControlChange; will select the previous cue in the cuelist

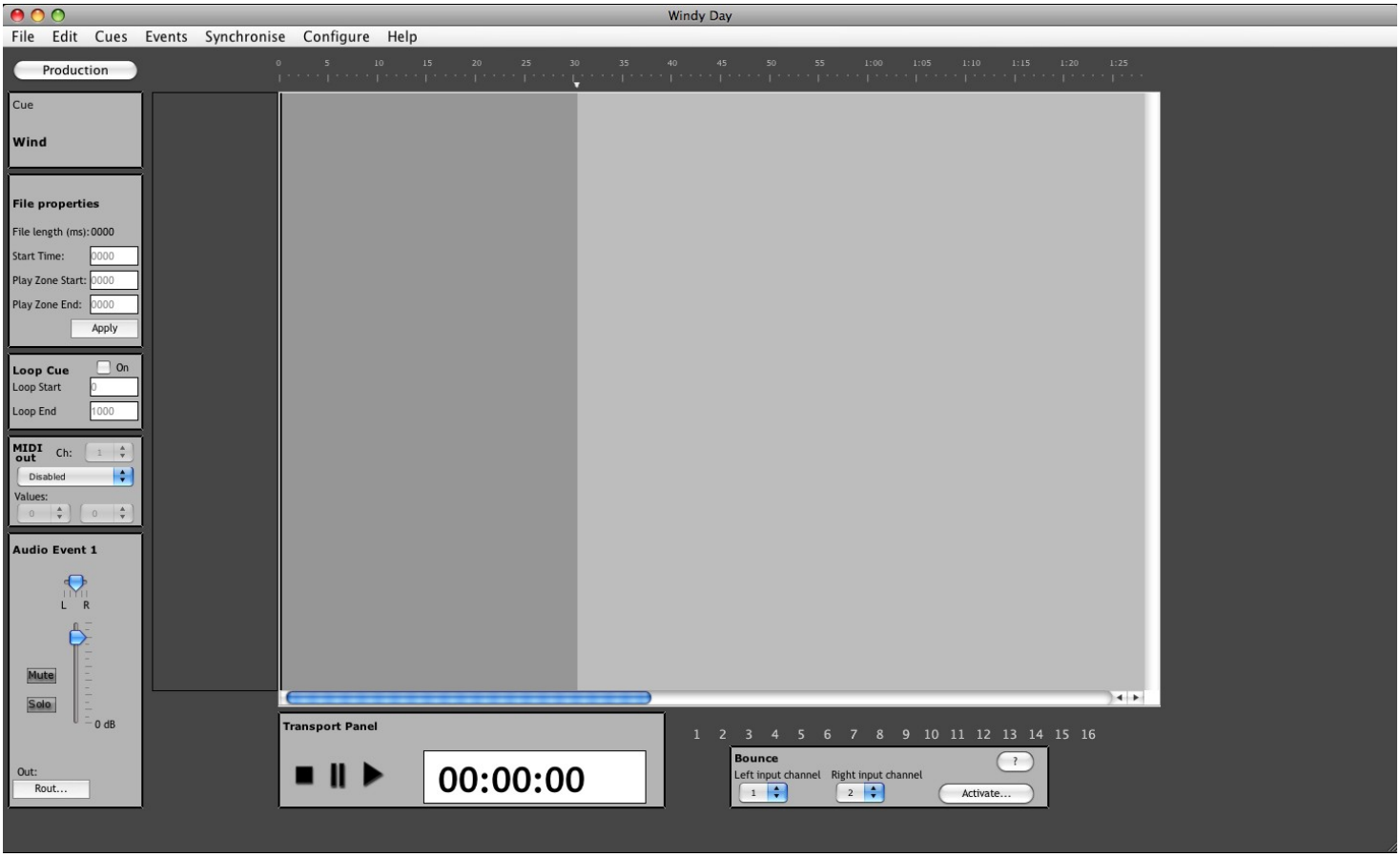
3.6 PRODUCTION MODE

The Production Mode checkbox puts the software into "safe-mode" and removes all menubars and shortcuts except Space for playback and Esc for Panic Stop.
Production Mode is designed for use in a production situation where no editing is required, thus allowing the production to be run safely in a playback-only mode by a less experienced operator.
Production Mode can be toggled on/off via the checkbox in Production View. Note that this status will not be saved with the production.

4. EDITING THE CUES – THE TIMELINE

4.1 THE TIMELINE

This section will take you through how to edit a cue, how to add sound files to your cue and how to adjust the timing between them.
To edit a cue, select a play-cue and select Edit Cue. Cues->Edit Cue *(Shortcut: Ctrl+Enter)*.



Timeline View

Above is the edit interface showing the Timeline View. The cue is empty as no events have yet been added.
Event Lines in a cue are stacked vertically (up to 16 Audio Event Lines per cue, unlimited Stagetracker Event Lines*).
The timeline runs horizontally, left to right.

**Only available to Stagetracker FX Effects Engine users.*

4.2 PLAYBACK IN TIMELINE

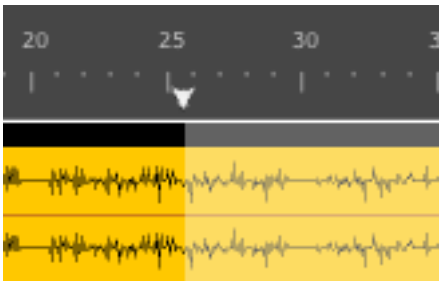
4.2.1 PLAYHEAD MARKER

When playing back from the Timeline View, you will notice a vertical line moving horizontally from left to right. This line represents the Playhead. The Playhead moves over all the Event Lines which have been placed in the cue. When the Playhead moves over an underlying Event on an Event Line, the Event will be triggered.
To move the Playhead manually marker while editing:

- click or click and drag in the time panel (where the time markers are, above the work-area.)
- click and drag on the Playhead marker itself.

4.2.2 END OF CUE MARKER

The triangle shaped icon below the time markers marks the end of the cue. You will also notice a semitransparent panel in the work-area extending from this point.



When the Playhead reaches this marker, the cue will stop.
To move this marker:

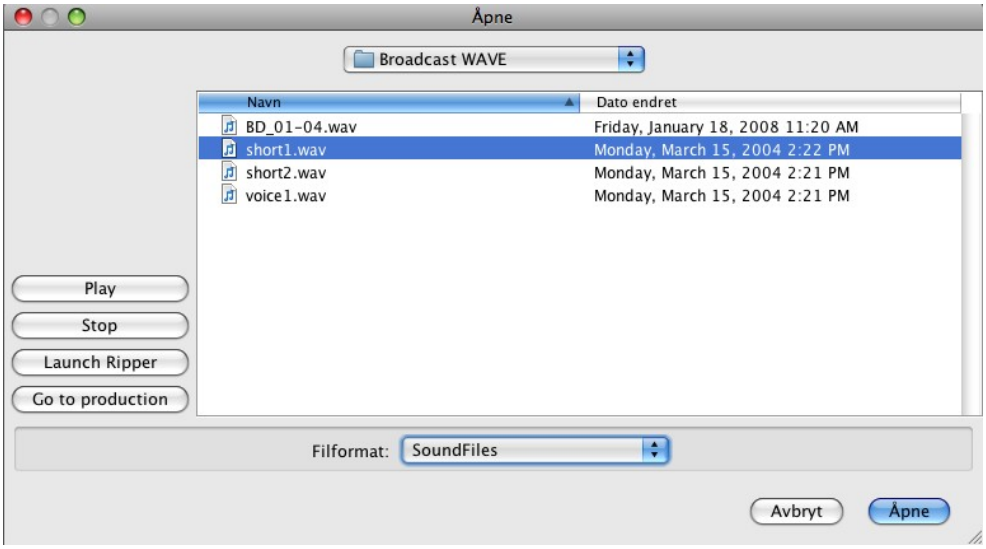
- click and drag the marker itself.
- use Edit → Set cue end numerically.

  This option allows you to numerically enter the end time of the cue. This will also expand the work-area if the time entered is outside the current cue time. This can be helpful when creating long wait cues.

4.3 EVENTS

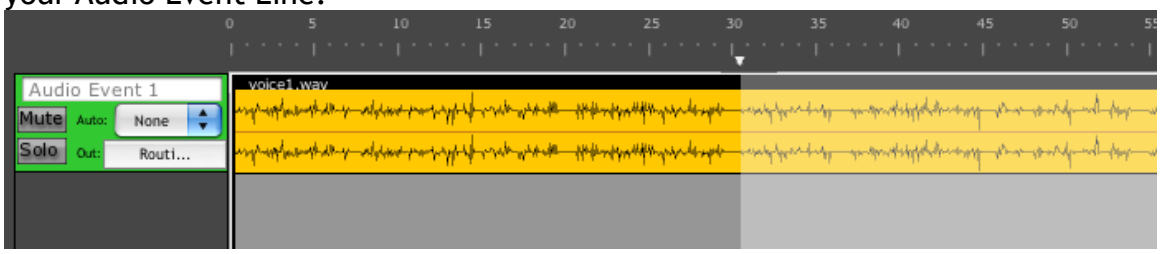
4.3.1 AUDIO EVENT LINES

A sound file imported for playback in TTA FX is referred to as an Audio Event. Audio Events are placed on Audio Event Lines. Each Audio Event Line can be associated with one and only one sound file. An Audio Event Line does however, allow for multiple Audio Events on the same Audio Event Line through the use of Duplicates, automation etc.
First add an Audio Event Line to your production so there is something to work with. Events → Add → Audio Event Line. *(Shortcut: Ctrl+n).*
This will create a new Audio Event Line and automatically open the file chooser to load a sound file into the newly created Audio Event Line.



The file chooser. Select a .wav, .aiff or .mp3 file. To preview the file, select the file and use the play/stop buttons. If you are browsing a CD, click Launch Ripper to rip the track from the CD.
Hit OK when you have found your file.
(NB. Preview is not available for CD tracks or .mp3 files.)

After hitting OK, the sound file is copied into your production folder, the waveform for the sound file is drawn and the waveform is added to the start of your Audio Event Line.

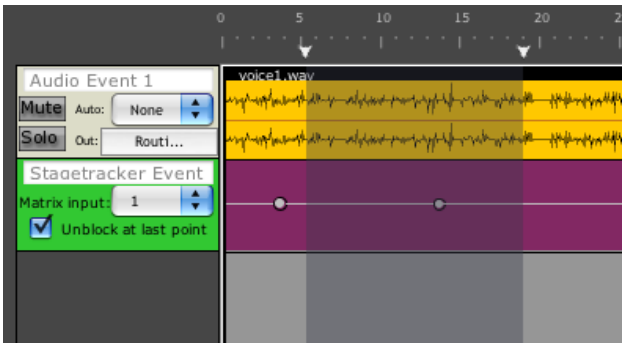


4.3.2 ADD / DELETE EVENT LINES

To add Event Lines, select Events → Add → Audio Event Line/ Stagetracker Event Line. *(Shortcut to create Audio Event Line: Ctrl+n)*
To delete Event Lines, select the desired Event Line to delete, and select Events → Delete Event Line. *(Shortcut: Ctrl+w)*

4.3.3 LOOP POINTS

To turn a cue into a loop cue, click in the Loop Cue checkbox.
You will notice that the End of Cue marker now changes to a panel with a start and a stop. This represents the loop area.

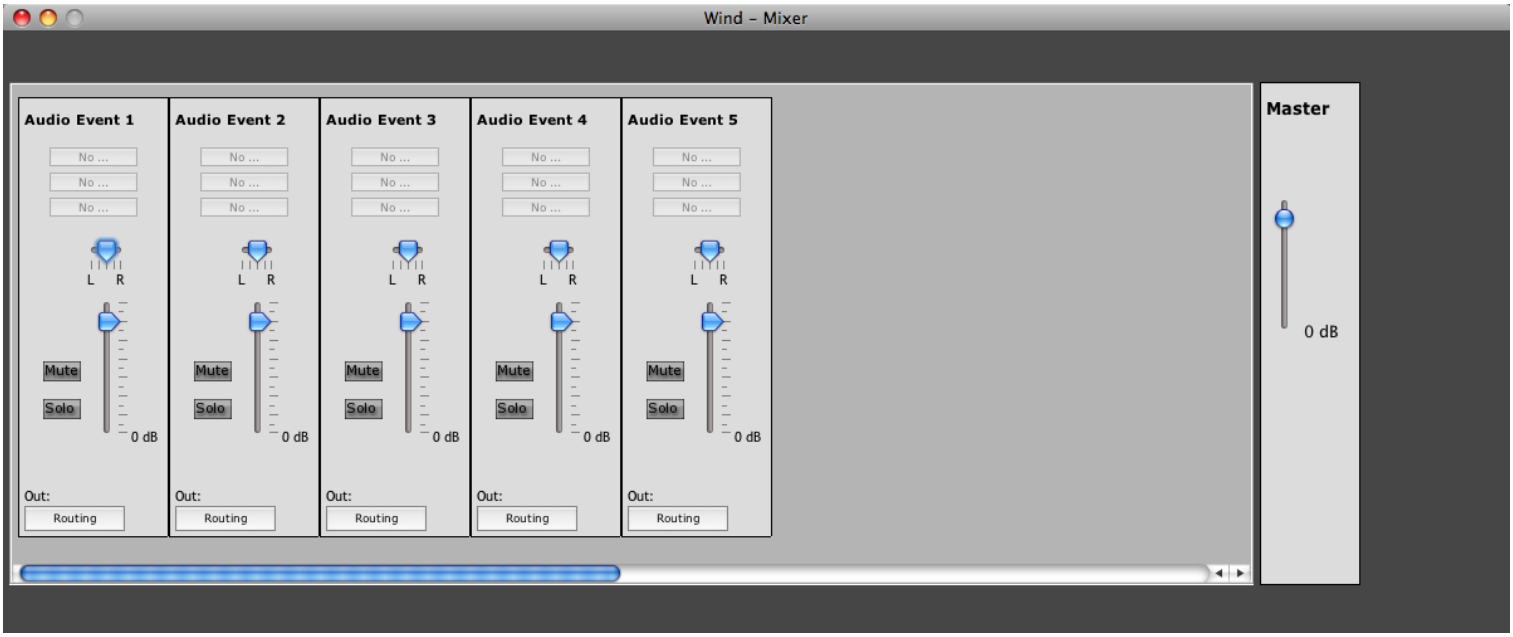


During playback, the Playhead will move from the start of the cue until it reaches the Loop End marker, at which point it will jump back to the Loop Start marker and loop infinitely between the two markers until stopped.
To change the position of Loop Start and Loop End:

- click and drag the two markers; Loop Start and Loop End.
- numerically enter values into the boxes below the checkbox used to enable Loop Cue. Ctrl+click in these boxes will allow edits to be made. Ctrl+click again to disable edit and set the value to the value you just typed.

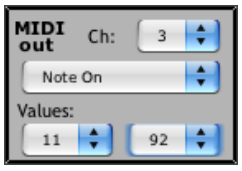
4.3.4 THE MIXER

Each cue has its own mixer where you can adjust the individual volume of each of the Audio Event Lines within the cue. *(Unless overridden by automation)*.



In addition to giving access to volume, pan, routing etc, the mixer also allows you to set the master output volume for the cue.
To access the mixer, select Mixer. Cues->Mixer View. *(Shortcut: Ctrl+m)*.

4.3.5 MIDI OUT



Every Play Cue can send out a MIDI message. The device selected in Configure → User Preferences will be used as the output for the message. Use the dropdown menus to select the type of message and values you wish to send. This message will be sent when the cue is triggered from the Production View.

4.4 EVENT EDITING

4.4.1 MUTE

All Audio Event Lines may be muted individually. Use the mute button or right-click anywhere in the Audio Event Line (not on an actual Audio Event) and select Mute to mute the audio from the Event Line *(Shortcut: m)*.

Several Audio Event Lines may be muted at the same time to allow the user to listen to only the desired Audio Event Lines.

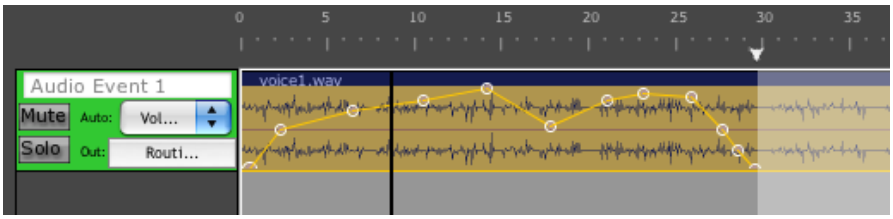
4.4.2 SOLO

Solo works in a similar way to mute for all Audio Event Lines. Use the solo button or right-click anywhere in the Audio Event Line (not on an actual Audio Event) and select Solo to solo the selected Event Line *(Shortcut: s)*.

Several Audio Event Lines may be soloed at the same time to allow the user to listen to only the desired Audio Event Lines.

4.4.3 AUTOMATION CURVES

4.4.3.1 VOLUME



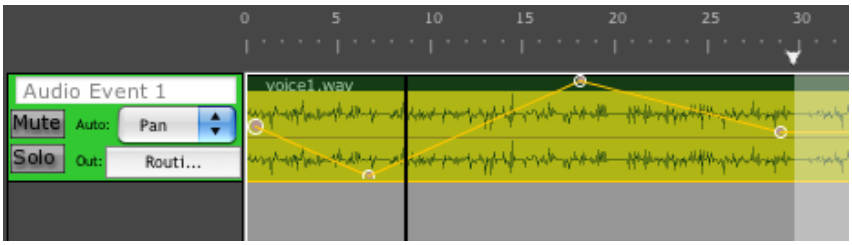
Selecting the volume automation in the automation dropdown menu, places a blue overlay over the Audio Event Line indicating that you are now in volume automation mode. Automation can also be accessed by right-clicking in the Audio Event Line (not on an actual Audio Event) and select Automation → Volume.

- The vertical axis ranges from mute to +12dB *(down to up)*, and the horizontal axis controls the timing of the automation.

- To add automation points, click anywhere within the blue area. Hold your mouse pointer directly above a point to see its numerical dB value.
- To move an automation point, click the point and drag. You will delete any point you pass when dragging points.
- To delete a single point, ctrl+click the point you wish to delete.
- To delete all points, right-click and select Remove Automation Data. *(Note that this will only affect the selected automation type, in this case, Volume)*.
- Any automation points within the boundaries of the waveform will also move together with the waveform when the waveform is dragged.

(Select None in the automation drop-down menu to again select and edit the waveform).

4.4.3.2 PAN



Selecting the pan automation in the automation dropdown brings up a green overlay over the Audio Event Line indicating that you are now in pan automation mode. Automation can also be accessed by right-clicking in the Audio Event Line (not on an actual Audio Event) and select Automation → Pan.

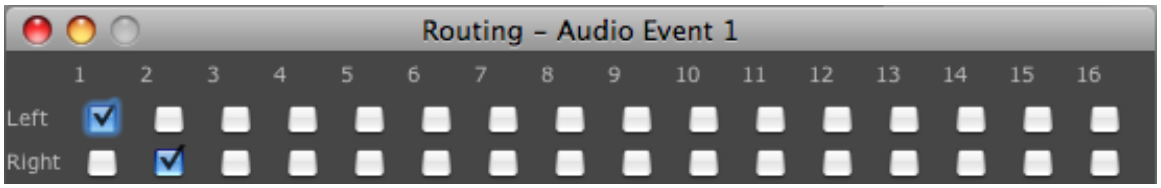
- The vertical axis controls the left/right movement of the sound *(as defined in the Routing menu, see next section)*. All the way down is right, all the way up is left, centre is equal amounts of left and right.
- For stereo files, this will work as a L/R balance. For mono files it works as a stereo pan.
- All other automation functionality is the same as for volume.

4.4.4 IN AND OUT FADES

Using the Fade function automatically creates volume automation points.

To create a Fade In, move the Playhead to the time in the cue where you would like the Fade In to start. The audio will then fade in from mute to 0dB over the time specified.
A Fade Out can be created by the same method. The audio will fade from 0dB to mute over the time specified.

4.4.5 ROUTING



Clicking the Routing button brings up the Routing menu. Routing can also be accessed by right-clicking in the Audio Event Line (not on an actual Audio Event) and selecting Routing.
Here you can define the outputs to which the audio will be sent. The default setting is output 1 for left and output 2 for right, meaning that for stereo files, the left channel (1) is sent to output 1 and the right channel (2) is sent to output 2. For a mono file this works as a double mono, sending the same signal to both output 1 and 2. You are free to route audio files to any combination of outputs you wish. For example, you could send the left channel to all 16 outputs and completely mute the right channel. The routing window gives you lots of options for how to route the sound.
Note that the outputs which you define here as left and right are used as the left/right outputs when panning via the pan automation.
(The routing screen assumes you have a sound card with 16 (or more) outputs. If this is not the case, only use the applicable number of outputs for routing audio.
Note that the software will always show 16 outputs, even when installed on a system using fewer outputs. This allows the user to setup productions for installations using a greater number of outputs. This can be particularly helpful when setting up a production in advance, for example, at home on a laptop.)

4.4.6 EQ

Each Audio Event Line has its own equalizer. This is a 6-band graphic equalizer and will apply the same equalization to all Audio Events on the Audio Event Line.
Accessed through Edit → Equalizer. The EQ can also be accessed by right-clicking in the Audio Event Line (not on an actual Audio Event) and selecting EQ. This will open the selected Audio Event Line's EQ.

The first and last bands are Hi-pass and Lo-pass filters, the other bands are parametric. These 4 bands have their own centre frequency, Q and dB.
By clicking and dragging the yellow dots (bands) around, you change the band's parameters. The vertical axis controls the dB and the horizontal axis controls the centre frequency.
By ctrl+click the text areas, the values can be changed numerically. Enter a new value and click the Enter key to accept.
Use the On/Off button to bypass or activate the EQ.
The copy settings menu allows you to copy the EQ settings from any Audio Event Line in the same cue.

4.4.7 PITCH CHANGE

Each Audio Event Line also has its own Pitch Changer.
Accessed through Edit → Pitch Change. The Pitch Change can also be accessed by right-clicking in the Audio Event Line (not on an actual Audio Event) and selecting Pitch Change. This will open the selected Audio Event Line's Pitch Change.

Pitch Change slider affects how big the transposition is.
Volume slider sets the output volume out from the effect.
Use the Activate checkbox to activate or bypass the Pitch Change.

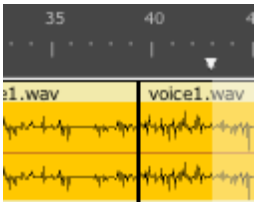
4.5 SOUND FILE EDITING

4.5.1 DRAGGING IN THE TIMELINE

To move the sound file in the timeline, simply click and grab on the waveform. If you move the mouse pointer to the lower left or right corner of the waveform, the pointer changes to a hand symbol indicating that you can now drag the in and out crop points for the sound file. *(The crop points can also be set using the numerical input area in the file properties. To enable editing of a textbox, ctrl+click the box to enable entering of values, ctrl+click again to lock the textbox. Click the Apply button to apply the values to the selected Audio Event).*

4.5.2 SPLIT

The split option allows you to split an Audio Event in two at the position of the Playhead marker. The resulting two Audio Events can then be treated individually, with their own start and crop points.
To split, set the Playhead marker at the desired position, right-click the waveform and select Split.



(Note, the Split is applied to the selected Audio Event Line.)

4.5.3 DUPLICATES

In TTA FX each Audio Event Line is associated with one and only one sound file, (Audio Event). However, you can add as many duplicates of the same Audio Event as you would like, providing they don't overlap.
Each Audio Event duplicate can have its own properties, crop points and timing. To create a duplicate, select Duplicate. Edit → Duplicate *(Shortcut: Ctrl+k)*, right-click on the Audio Event and select Duplicate or use the Split command explained in the previous section.

All the waveforms shown here are duplicates of the same sound clip.

If you wish to apply a different effect to a duplicate, you should assign it to its own Audio Event Line. To do so, select the Audio Event you wish to duplicate and select Duplicate To New Track. Edit → Duplicate To New Track.

4.6 BOUNCING AUDIO

The bounce option allows you to create mixes of Audio Events into a new sound file. Use this option to combine several Audio Event Lines into a single new sound file. You can then delete the original Audio Event Lines used in the bounce, add a single new Audio Event Line and load the newly created bounced file.
Bouncing in TTA FX works by selecting which output channels from the system to "listen" to for creating the bounce. Left and right side of the audio file are selected separately using the dropdown menus. Click Activate to choose a name for the resulting file and where on the hard drive to place it.
After having Activated bounce, TTA FX will record anything going to the two selected outputs the next time playback is started.
When playback is stopped, the bounce function is automatically de-activated.

4.7 STAGETRACKER EVENT LINES

This section applies to Stagetracker FX Effects Engine users only.

Integration of the Stagetracker FX Effects Engine with the Tracking Engine software allows the user to remove audio sources from tracking control and to place them at static positions or to move them automatically between pre-programmed positions.
These static positions and movements are programmed in the Effects Engine via the use of Stagetracker Event Lines.

Each Stagetracker Event Line can be associated with only one Matrix input.

To create a Stagetracker Event Line, click Events → Add → Stagetracker Event Line

This will create a blank Stagetracker Event Line.

The first thing to do is to select the Matrix input that this Stagetracker Event Line will control.

A Stagetracker Event is a point placed on a Stagetracker Event Line.

Create a Stagetracker Event by simply left clicking in the purple area at the time in the cue when you wish the Event to occur.

Right click on the Stagetracker Event and hold the mouse button down. If you move the mouse slightly, you will see that the icon on the Tracking Engine screen which represents the audio source connected to the matrix input is now under control of the mouse. Move the icon to the desired position and release the button.

If the selected Matrix input is a trackable input, when the Playhead (see section 4.4.1) reaches the Stagetracker Event, the audio source connected to that input will be removed from automatic tracking and placed in this chosen position.
A static input will simply be moved to this position.

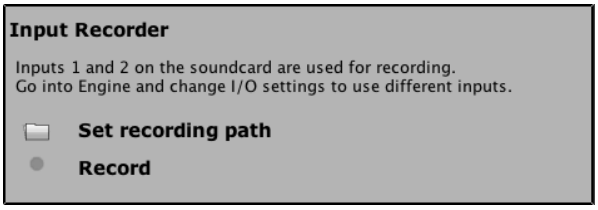
By repeating the method described above, multiple Stagetracker Events can be added to the same Event Line.

If two or more Stagetracker Events are placed on the same Event Line, the software will automatically move (pan) the audio source from the first position to the second, at a speed determined by the distance between the two points.

"Unblock at last point" is a user selectable option for each Stagetracker Event Line. If this is selected, when the Playhead reaches the last Stagetracker Event on the Event Line, the audio source will be moved to this point and then immediately returned to automatic tracking control.
If this box is not checked, the audio will remain at the position determined by the last Stagetracker Event.
A static input will simply remain at the last position set by a Stagetracker Event.

(The computer running the Stagetracker FX Effects Engine must be in the same IP range as the computer running the Stagetracker Tracking Engine.
The IP should be in the range 192.168.0.x where x is a number between 1 and 255.
Note, 192.168.0.1 is occupied by the Stagetracker Tracking Engine and 192.168.0.99 is occupied by the Stagetracker Matrix.
RadioEyes have IP 192.168.0.101 and up, depending on how many RadioEyes are in use.
Suggested IP range for Stagetracker FX Effects Engine is 192.168.0.150 – 192.168.0.255)

5. RECORDING AUDIO


Input Recorder
Inputs 1 and 2 on the soundcard are used for recording.
Go into Engine and change I/O settings to use different inputs.
Set recording path
Record

TTA FX contains a stereo input recorder. The Input Recorder's panel can be found in the Production View.
The recorder, when enabled, will record any audio coming in to inputs 1 and 2 on the sound card. The resulting file will be in *.aiff format.
Click the folder icon to set a recording path and file name.
After doing this, the Record icon will be active. Click the Record button once to start recording. Click again to stop recording.

6. SYNCHRONISING MULTIPLE TTA FX INSTALLATIONS

6.1 HOW IT WORKS

One of the key features of the TTA FX system is its ability to run several instances of the software on a network. In such installations, one installation will be the *Master* installation, and all others are *Clients*.
Several users can work on the same production from different installations on the network. All installations can open productions locally and from the Master. When you save a production on a *Client* installation, it also updates the *Master*. When you then try to open a production on a *Client* installation, it will find and open the most up-to-date version. This ensures that you will always be working with the same version of the production no matter which TTA FX ® networked installation you are using.
If you are not running your TTA FX installation on a network, you have the convenience of transferring a production from one computer to computer using a memory stick/CD (or similar) as all TTA FX production folders are self-contained *(All files needed for the production are in the same folder.)*

Note: It is always good practice to backup productions to removable media.

6.2 HOW TO SET IT UP

To set up a Mac OSX computer for TTA FX synchronization, follow these steps:

- If this computer is the Master, go into System Preferences -> Sharing and enable File Sharing/Windows sharing. Then locate its IP-address as this is needed for all Client installations on the network.
- If this computer is a Client, you will need to open a connection to the Master computer in Finder. If the Master is a Windows computer, go to Finder → Go → Connect to Server. Type in "smb://xxx.xxx.xxx.xxx" where the x's are the IP-address of the Master computer. Similarly, if the Master is Mac OS X computer, go to Connect To Server and type in "afp://xxx.xxx.xxx.xxx" where the x's are the IP-address of the Master computer. You might need a username and password to authenticate.
- It is a good idea to create a script to auto mount the Master Volume so you do not have to go through these steps each time. Use OS X's AppleScript to create a script that mounts the Master volume.

To set up a Windows computer for TTA FX synchronization, follow these steps:

- If this computer is the Master, enable file sharing of the TTA folder *(default location C:/TTA)*. Locate the computer's IP address as this is needed for all Client installations on the network.
- If this computer is a Client, you will need to open a connection to the Master first. Open Windows Explorer and type in "\\xxx.xxx.xxx.xxx" in the address field, where the x's are the IP-address of the Master computer. You might need a username and password to authenticate.
- It is a good idea to map the Master volume as a network hard drive so you do not have to go through these steps every time. To do so, right-click on the newly mounted Volume in My Computer and select "Map Network Drive".

It is recommended to use static IP-addresses for all computers on the network in order to avoid having to re-enter the address when allocated new IP's.
It is also recommended that all IP-addresses on TTA FX installations should be in the range 192.168.0.150 – 192.168.0.255.

To set up synchronization between installations in the TTA FX software:

Sync Settings
No Sync
Sync
Master's name or IP address:
/Users/Shared
To enable sync:
- create a folder on one of your drives
- make sure the folder is visible from all your networked computers
- select this folder on all TTA FX installations
Ok
Cancel

Activate synchronization by clicking the "Sync" radiobutton.
You will then need to select the location to which you wish to synchronize by clicking the folder icon and browsing to the location.
If the previous steps were not followed, the remote location will not be mapped up correctly and will be unavailable in this dialog. *(This location can be both local and anywhere on the computer's network.)*

When this is completed, you will then be able to access productions on the Master whenever you go to File → Open *(Shortcut: Ctrl+o)*.
By selecting "List shows on master instead" the productions list will show all the productions currently on the Master rather than local productions.
Select a production on the Master to download this production to the local installation.

6.3 AUTO SYNCHRONISATION

After synchronisation has been set up as described in the previous step, TTA FX will attempt to synchronise the production every time you load a production or close/quit TTA FX.
Every time you save a production in TTA FX the version number of the production is incremented.
When you load a production, TTA FX will compare the local version of the production to the version on the Master (if one exists).

- If the Master does not have the local production you will be asked to upload the production to the Master.
- If the local version is newer, you will be asked to upload the production to the Master.
- If the local version is the same as the one on the Master, you will be notified that there are no changes to the production.
- If the version on the Master is newer, you will be notified and asked to download the version from the Master.
- If both versions have been changed since the last synchronisation, for example if the newest version was uploaded to the server from a different installation in the network, you will be notified that both versions have changed. In this case, you will be asked if you wish to download the version from the Master or if you wish to upload the local version to the Master.

6.4 MANUAL SYNCHRONISATION

To manually synchronise at any time, click Synchronise → Sync Production Now! Same version detection as described above applies.

A. SUPPORTED AUDIO FORMATS

Currently supported audio formats include:

- Mono and stereo *.wav files.
- Mono and stereo *.aiff files.
- Mono and stereo *.mp3 files.
- Bit rates: 8-32 bit.

B. TROUBLESHOOTING

Problem: A cue containing sound clips is running but no audio is heard.
Solution:
- check that the channels in the cue are not muted, or routed to different outputs than those you are listening to.
- check to see that both FX and Audio_Engine are running. If not, save your production and relaunch TTA FX.
- check the setup in Audio_Engine. Especially the audio driver and buffer settings.
- check to see that the sound card is correctly installed. The easiest way is to play sound from a different application. (iTunes, Windows Media Player or similar.)

Problem: A cue never goes into loaded state.
Solution: This can occur if you don't have enough spare slots to load the cue's sound files into. There can only be a maximum of 16 at any one time. When a cue starts to load, it will check to see that all the sound files can be loaded. If not, it will wait until another slot is open and check again.
If you need to load more cues simultaneously, you should bounce down some of your Audio Events to make more slots open for the following cues.

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